

## **CLAIMS**

- 5 1. A system for threading heterogeneous items of electronic communication into a post-response metaphor, comprising:  
means for interfacing with a plurality of external communication systems of varying type; and  
a server, said server operative to create records that uniquely identify  
10 and link communication items created by a plurality of users within any of said external communication systems whereby a threaded trail of collaborative communication is created.
2. The system of Claim 1, wherein said means for interfacing with said  
15 external communication systems comprises a threading connector API (application programming interface), said threading connector API operative to build connectors to said external communication systems.
3. The system of Claim 2, wherein said connectors define methods for  
20 interacting with said external communication systems.
4. The system of Claim 2, wherein said methods include:  
creating a new item;  
deleting an existing item;  
25 viewing an item;  
editing an item; and  
creating a placeholder for a future item.
- 30 5. The system of Claim 2, wherein a connector accepts a request for an action from within said system and initiates said requested action in one of said external systems.

6. The system of Claim 2, said server comprising a threading server, said record including:

a unique ID;  
title;  
description;  
type;  
original post ID;  
parent ID; and  
item data.

7. The system of Claim 6, wherein item data comprises a marker or string passed to a native external system for the purpose of interacting with the item.

8. The system of Claim 7, wherein said items of communication are stored within the external system from which they originate.

9. The system of Claim 6, wherein said connectors are registered on said threading server.

10. The system of Claim 9, wherein registering a connector comprises providing:

name of a communication type to be registered;  
a description of said type to be registered;  
at least one class that implements said connector of said type to be registered through a client;  
at least one image file to designate items of said type to be registered within a user interface of said client; and  
optionally, network address of a server for said type to be registered.

11. The system of Claim 9, wherein said threading server provides a listing of registered communication types.

12. The system of Claim 2, further comprising a persistent data store for said records, said persistent data store in communication with said server.

13. The system of Claim 12, wherein said persistent data store comprises one of:

- a relational database;
- an object-oriented database; and
- custom-formatted files.

14. The system of Claim 12, wherein accesses to said persistent data store are mediated through a standard API.

15. The system of Claim 2, further comprising at least one client.

16. The system of Claim 15, wherein said client comprises:  
a servlet component instantiated on a web server, said servlet component providing a link between said server and a web browser.

17. The system of Claim 15, wherein said client comprises an intranet application.

18. The system of Claim 15, said client including a user interface, wherein said user interface displays said threaded trails of communication.

19. The system of Claim 18, said user interface comprising means for:  
creating a new post;  
viewing a list of posts and responses in order of creation;  
searching posts and responses according to user-defined criteria;  
viewing a list of all responses to a given post as a collapsible hierarchy;  
opening and viewing an item;  
creating a new response for any given post or response;

deleting a post/response item;  
viewing detailed information related to a post/response item; and  
creating a placeholder for a future item.

20. The system of Claim 19, wherein a post/response item can only be deleted by creator of said item or a system administrator.

21. The system of Claim 1, further comprising means for associating said threaded trail with any of a process and a process step.

22. A method of threading heterogeneous items of electronic communication into a post-response metaphor, comprising:

providing means for interfacing with a plurality of external communication systems of varying type; and

providing a server,

creating records on said server that uniquely identify and link communication items created by a plurality of users within any of said external communication systems; and

creating a threaded trail of collaborative communication according to said links.

23. The method of Claim 22, wherein said means for interfacing with said external communication systems comprises a threading connector API (application programming interface), said method further comprising the step of;

building connectors to said external communication systems by means of said threading connector API.

24. The method of Claim 23, wherein said connectors define methods for interacting with said external communication systems.

25. The method of Claim 23, wherein said defined methods include:

creating a new item;

deleting an existing item;

viewing an item;  
editing an item; and  
creating a placeholder for a future item.

26. The method of Claim 23, further comprising the steps of:  
accepting a request for an action from within said system by a  
connector and:  
initiating said requested action in one of said external systems.

27. The method of Claim 23, said server comprising a threading server,  
said record including:

a unique ID;  
title;  
description;  
type;  
original post ID;  
parent ID; and  
item data.

28. The method of Claim 27, wherein item data comprises a marker or  
string passed to a native external system for the purpose of interacting with  
the item.

29. The method of Claim 28, further comprising the step of:  
storing said items of communication within the external system from  
which they originate.

30. The method of Claim 27, further comprising the step of:  
registering said connectors on said threading server.

31. The method of Claim 30, wherein registering a connector comprises  
the steps of providing:

name of a communication type to be registered;

a description of said type to be registered;  
at least one class that implements said connector of said type to be registered through a client;  
at least one image file to designate items of said type to be registered  
5 within a user interface of said client; and  
optionally, network address of a server for said type to be registered.

32. The method of Claim 27, further comprising the step of:  
said threading server providing a listing of registered communication  
10 types.

33. The method of Claim 23, further comprising the step of:  
providing a persistent data store for said records, said persistent data  
store in communication with said server.  
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34. The method of Claim 33, wherein said persistent data store comprises  
one of:  
a relational database;  
an object-oriented database; and  
20 custom-formatted files.

35. The method of Claim 33, further comprising the step of:  
providing a standard API through which accesses to said persistent  
data store are mediated.  
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36. The method of Claim 23, further comprising the step of providing at  
least one client.

37. The method of Claim 36, wherein said client comprises:  
30 a servlet component instantiated on a web server, said servlet  
component providing a link between said server and a web browser.

38. The method of Claim 36, wherein said client comprises an intranet application.

39. The method of Claim 36, said client including a user interface, said method further comprising the step of:  
displaying said threaded trails of communication in said user interface.

40. The method of 39, further comprising any of the steps of:  
creating a new post;  
viewing a list of posts and responses in order of creation;  
searching posts and responses according to user-defined criteria;  
viewing a list of all responses to a given post as a collapsible hierarchy;  
opening and viewing an item;  
creating a new response for any given post or response;  
deleting a post/response item;  
viewing detailed information related to a post/response item; and  
creating a placeholder.

41. The method of Claim 40, wherein a post/response item can only be deleted by creator of said item or a system administrator.

42. The method of Claim 22, further comprising means for associating said threaded trail with any of a process and a process step.

43. A graphical user interface for displaying and accessing heterogeneous items of electronic communication threaded into a post-response metaphor comprising:  
a workspace;  
an electronic form displayed within said workspace wherein said items of communication are presented in a threaded trail of collaborative communication;

means for creating and accessing items of communication by a user;  
and  
means for creating placeholders for future items.

44. The user interface of Claim 43, wherein said threaded trail comprises a root post, and a plurality of related posts arranged in a post-response metaphor, and wherein a response is associated with its parent post, so that posts and responses are displayed in a hierarchy, said root post forming the top level of the hierarchy.

45. The user interface of Claim 44, wherein entries on said form comprise records representative of said items of communication, said items of communication externally created and stored.

46. The user interface of Claim 45, wherein said means for creating and accessing said items comprises a plurality of interface elements, wherein activation of an interface element invokes a connector to an external communication system wherein an item is either created or modified.

47. The user interface of Claim 46, wherein a connector comprises a class that defines methods for interacting with said external system.

48. The user interface of Claim 47, wherein user requests are received by said connector and initiated on said external system.

49. The user interface of Claim 46, wherein interacting with said external system includes any of:

creating a new post;

viewing a list of posts and responses in order of creation;

searching posts and responses according to user-defined criteria;

viewing a list of all responses to a given post as a collapsible hierarchy;

opening and viewing an item;



creating a new response for any given post or response;  
deleting a post/response item;  
viewing detailed information related to a post/response item; and  
creating a placeholder for an item;  
5 wherein operations are performed within context of a process or step.

50. The user interface of Claim 46, wherein said means for creating a placeholder comprises means for creating a record for an item of communication in advance of creating said item, so that said record is  
10 displayed as a placeholder within said trail.

51. The user interface of Claim 43, further comprising means for displaying a process and its component steps.

15 52. The user interface of Claim 54, further comprising means for displaying said threaded trail in a context of an associated step of a process.